

solid state communications

an international journal

volume 120



Pergamon

SOLID STATE COMMUNICATIONS

EDITOR-IN-CHIEF, MANUEL CARDONA

ASSOCIATE EDITOR-IN-CHIEF, ARON PINCZUK

BOARD OF EDITORS

Editor	E-mail address
H. AKAI, <i>Japan</i>	akai@phys.sci.osaka-u.ac.jp
T. ANDO, <i>Japan</i>	ssc-ando@issp.u-tokyo.ac.jp
P. BURLET, <i>France</i>	burlet@drfmc.ceng.cea.fr
K.-A. CHAO, <i>Sweden</i>	koung-an.chao@teorfys.lu.se
R.G. CLARK, <i>Australia</i>	rgc@newt.phys.unsw.edu.au
E. DAGOTTO, <i>U.S.A.</i>	ssc@magnet.fsu.edu
J.H. DAVIES, <i>U.K.</i>	jdavies@elec.gla.ac.uk
P.H. DEDERICH, <i>Germany</i>	l.gerken@fz-juelich.de
R.C. DYNES, <i>U.S.A.</i>	red@ucsd.edu
H. ESCHRIG, <i>Germany</i>	h.eschrig@ifw-dresden.de
Z.Z. GAN, <i>People's Republic of China</i>	zzgan@ibm320h.phy.pku.edu.cn
C.E.T. GONÇALVES DA SILVA, <i>Brazil</i>	cylon@lnls.br
M. GRYNBERG, <i>Poland</i>	grynberg@fuw.edu.pl
M. HEIBLUM, <i>Israel</i>	heiblum@wis.weizmann.ac.il
E.L. IVCHENKO, <i>Russia</i>	ivchenko@coherent.ioffe.rssi.ru
B. JUSSERAND, <i>France</i>	bernard.jusserand@cnet.francetelecom.fr
L.V. KELDYS, <i>Russia</i>	keldysh@lpi.ru
J. KUHL, <i>Germany</i>	kuhl@servix.mpi-stuttgart.mpg.de
D.J. LOCKWOOD, <i>Canada</i>	david.lockwood@nrc.ca
H. VON LÖHNESEN, <i>Germany</i>	h.vl@phys.uni-karlsruhe.de
S.G. LOUIE, <i>U.S.A.</i>	louie@jungle.berkeley.edu
G. LUKE, <i>Canada</i>	luke@mcmaster.ca
A.H. MACDONALD, <i>U.S.A.</i>	macd@physics.utexas.edu
E.E. MENDEZ, <i>U.S.A.</i>	emilio.mendez@sunysb.edu
E. MOLINARI, <i>Italy</i>	molinari@unimo.it
C.A. MURRAY, <i>U.S.A.</i>	camurray@lucent.com
T.T.M. PALSTRA, <i>The Netherlands</i>	palstra@chem.rug.nl
R.T. PHILLIPS, <i>U.K.</i>	rtp1@phy.cam.ac.uk
C.N.R. RAO, <i>India</i>	cnrrao@jncasr.ac.in
J.F. SADO, <i>France</i>	sadoc@lps.u-psud.fr
P. SHENG, <i>China</i>	phsheng@ust.hk
A.K. SOOD, <i>India</i>	asood@physics.iisc.ernet.in
H. TAKAYAMA, <i>Japan</i>	takayama@issp.u-tokyo.ac.jp
C. TEJEDOR, <i>Spain</i>	carlos.tejedor@uam.es
S. USHODA, <i>Japan</i>	ushoda@ushoda.riec.tohoku.ac.jp
D.E. VAN DYCK, <i>Belgium</i>	dvd@ruca.ua.ac.be
P. WACHTER, <i>Switzerland</i>	wachter@solid.phys.ethz.ch
A. ZAWADOWSKI, <i>Hungary</i>	zawa@phy.bme.hu

SOLID STATE COMMUNICATIONS is a companion journal to THE JOURNAL OF PHYSICS AND CHEMISTRY OF SOLIDS.

Publishing Offices: Elsevier Science Inc., 655 Avenue of the Americas, New York, NY 10010, U.S.A.; Elsevier Science Ltd, The Boulevard, Langford Lane, Kidlington, Oxford OX5 1GB, U.K.; phone: (+44) (1865) 843000; fax: (+44) (1865) 843010.

Advertising information. Advertising orders and enquiries can be sent to: **USA, Canada and South America:** Mr Tino de Carlo, The Advertising Department, Elsevier Science Inc., 655 Avenue of the Americas, New York, NY 10010-5107, U.S.A.; phone: (+1) (212) 633 3815; fax: (+1) (212) 633 3820; e-mail: t.decarlo@elsevier.com. **Japan:** The Advertising Department, Elsevier Science K.K., 9-15 Higashi-Azabu 1-chome, Minato-ku, Tokyo 106-0044, Japan; phone: (+81) (3) 5561 5033; fax: (+81) (3) 5561 5047. **Europe and ROW:** Rachel Leveson-Gower, The Advertising Department, Elsevier Science Ltd., The Boulevard, Langford Lane, Kidlington, Oxford OX5 1GB, U.K.; phone: (+44) (1865) 843565; fax: (+44) (1865) 843976; e-mail: r.leveson-gower@elsevier.co.uk

Publication information: *Solid State Communications* (ISSN 0038-1098). For 2001, volumes 117–120 are scheduled for publication. Subscription prices are available upon request from the Publisher or from the Regional Sales Office nearest you or from this journal's website (<http://www.elsevier.nl/locate/ssc>). Further information is available on this journal and other Elsevier Science products through Elsevier's website: (<http://www.elsevier.nl>). Subscriptions are accepted on a prepaid basis only and are entered on a calendar year basis. Issues are sent by standard mail (surface within Europe, air delivery outside Europe). Priority rates are available upon request. Claims for missing issues should be made within six months of the date of dispatch.

Orders, claims and product enquiries: please contact the Customer Support Department at the Regional Sales Office nearest you: **New York:** Elsevier Science, PO Box 945, New York, NY 10159-0945, U.S.A.; phone: (+1) (212) 633 3730 [toll free number for North American customers: 1-888-4ES-INFO (437-4636)]; fax: (+1) (212) 633 3680; e-mail: usinfo-f@elsevier.com. **Amsterdam:** Elsevier Science, PO Box 211, 1000 AE Amsterdam, The Netherlands; phone: (+31) 20 4853757; fax: (+31) 20 4853432; e-mail: nlinfo-f@elsevier.nl. **Tokyo:** Elsevier Science, 9-15 Higashi-Azabu 1-chome, Minato-ku, Tokyo 106, Japan; phone: (+81) (3) 5561 5033; fax: (+81) (3) 5561 5047; e-mail: info@elsevier.co.jp. **Singapore:** Elsevier Science, No. 1 Temasek Avenue, #17-01 Millenia Tower, Singapore 039192; phone: (+65) 434 3727; fax: (+65) 337 2230; e-mail: asiainfo@elsevier.com.sg. **Rio de Janeiro:** Elsevier Science, Rua Sete de Setembro 111/16 Andar, 20050-002 Centro, Rio de Janeiro-RJ, Brazil; phone: (+55) (21) 509 5340; fax: (+55) (21) 507 1991; e-mail: elsevier@campus.com.br [Note (Latin America): for orders, claims and help desk information, please contact the Regional Sales Office in New York as listed above]

Author enquiries

Submissions: Please refer to "Instructions to Authors". For specific enquiries on the preparation of electronic artwork, consult <http://www.elsevier.com/locate/authorartwork/>

Other enquiries: For enquiries relating to the status of accepted articles through our Online Article Status Information System (OASIS), author Frequently Asked Questions and any other enquiries relating to Elsevier Science, please consult <http://www.elsevier.com/locate/authors/>

Contact details for questions arising after acceptance of an article, especially those relating to proofs, are provided when an article is accepted for publication.

Periodicals postage paid at Rahway, New Jersey. *Solid State Communications* (ISSN 0038-1098) is published four issues per month January to December in four volumes, by Elsevier Science Ltd., The Boulevard, Langford Lane, Kidlington, Oxford OX5 1GB, U.K. The annual subscription in the USA is \$3534.

Solid State Communications is circulated by Mercury International Limited, 365 Blair Road, Avenel, NJ 07001, U.S.A.

POSTMASTER: Please send address corrections to: *Solid State Communications*, c/o Customer Services, Elsevier Science Inc., 655 Avenue of the Americas, New York, NY 10010, U.S.A.

VOLUME 120, NUMBER 1
(Published 11 September 2001)

CONTENTS

	v	Editorial
M.T. Barriuso, P. García-Fernández, J.A. Aramburu and M. Moreno	1	Theoretical insight into the Jahn–Teller system $\text{NaCl}:\text{Rh}^{2+}$
M. Tanaka and Y. Masumoto	7	Energy transfer mechanism in Mn^{2+} doped CdS nanocrystals
A. Niazi, E.V. Sampathkumaran, P.L. Paulose, D. Eckert, A. Handstein and K.-H. Müller	11	$\text{Sr}_3\text{CuIrO}_6$, a spin-chain compound with random ferromagnetic– antiferromagnetic interactions
A.V. Scherbakov, A.V. Akimov, D.R. Yakovlev, W. Ossau, L.W. Molenkamp, S. Tatarenko and J. Cibert	17	Spin–lattice relaxation in semimagnetic CdMnTe/CdMgZnTe quantum wells with a two-dimensional hole gas tuned by optical excitation
V. Agarwal, J.E. Lugo and J.A. del Río	21	Reversible charging effects on optical properties of porous silicon
Y.D. Juang	25	Phase transition of lithium potassium niobate ceramics
J.J. Lu, C. Tien and L.Y. Jang	29	Evolution from heavy-fermion to mixed-valence behavior in the series $\text{CePt}_{1-x}\text{Ir}_x\text{Si}_2$
A. Kudelski, K. Fronc, J. Wróbel, S. Maćkowski, G. Cywinski, M. Aleszkiewicz, F. Kyrychenko, T. Wojtowicz, J. Kossut and J. Gaj	35	Microluminescence from a diluted magnetic semiconductor quantum well in a proximity of an iron micromagnet
H. Li, F. Ding, G. Wang, J. Zhang and X. Bian	41	Evolution of small nickel clusters during solidification
O.A.C. Nunes, A.L.A. Fonseca and D.A. Agrello	47	Photoinduced amplification of hypersound in superlattices
	I	Instructions to Authors
	III	Keywords

VOLUME 120, NUMBERS 2–3
(Published 26 September 2001)

CONTENTS

V.A. Ivanov, M. van den Broek and F.M. Peeters	53	Strongly interacting σ -electrons and MgB_2 superconductivity
J.A. Herbsommer, V.F. Correa, G. Nieva, H. Pastoriza and J. Luzuriaga	59	Vortex dynamics in $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_{8+\delta}$ single crystals with planar defects
A.Q. Jiang, Z.H. Chen, Y.L. Zhou and G.Z. Yang	65	Current transient versus time investigation of charged defect motion in sandwich-structured La-modified $\text{Bi}_2\text{Ti}_4\text{O}_{11}$ films for large charge storage
J.H. Krieger, A.M. Panich and A.R. Semenov	69	Ultraslow motion of domain wall in channel inclusion compound studied by means of NMR cross-relaxation
D. Hägele, J. Hübner, W.W. Rühle and M. Oestreich	73	Coherent dynamics of coupled electron and hole spins in semi- conductors
Y. Li, O. Voskoboynikov, C.P. Lee and S.M. Sze	79	Energy and coordinate dependent effective mass and confined electron states in quantum dots
Y. Matsuo, K. Takahashi and S. Ikehata	85	Phase transitions in trithallium hydrogen disulfate $\text{Tl}_3\text{H}(\text{SO}_4)_2$
J.W.L. Sakai and P.C. Morais	89	Photocarrier transport and recombination in an asymmetric quantum well subjected to a focused excitation

Vol. 120, Nos 1–12 Volume Index

T. Ohtani, Y. Miyoshi, Y. Fujii, T. Koyakumaru, T. Kusano and K. Minami	95	Superconductivity and phase transition in quasi-one-dimensional sulfide AV_6S_8 ($A = In, Tl, K, Rb, Cs$)
K. Marumoto, H. Tanaka, S. Kozaki, S. Kuroda, S. Miya, T. Kawashima and M. Yamashita	101	ESR observation of averaged-valence and charge-density-wave states in quasi-one-dimensional halogen-bridged binuclear metal complexes
Y.B. Zhang, S. Li, P. Hing, C.Q. Sun, W. Gao and S.X. Dou	107	Thermal transition behavior of $La_{1-x}Ca_xMnO_{3-\delta}$ oxides
S. Banerjee	113	Coulomb blockade observed in a Ge nanocrystalline thin film from a macroscopic-size device and its enhancement by photo-oxidation
M. Grottel, Z. Paják and J. Zaleski	119	1H NMR study of dynamical inequivalence of cations in $[C(NH_2)_3]_3Sb_2Cl_9$
A.V. Maslov and D.S. Citrin	123	Enhanced optical/THz frequency mixing in a biased quantum well
	I	Instructions to Authors
	III	Keywords

VOLUME 120, NUMBER 4

(Published 1 October 2001)

CONTENTS

K. Saito, A. Sato, A. Bhattacharjee and M. Sorai	129	High-precision detection of the heat-capacity anomaly due to spin reorientation in $TmFeO_3$ and $HoFeO_3$
Y.-x. Wang, W.-l. Zhong, C.-l. Wang and P.-l. Zhang	133	First-principles study on the optical properties of $SrHfO_3$ and $SrTiO_3$
S. Kondo, K. Amaya, S. Higuchi, T. Saito, H. Asada and M. Ishikane	137	Fundamental optical absorption of Cs_4PbCl_6
Y.X. Wang, W.L. Zhong, C.L. Wang and P.L. Zhang	141	First-principles study of the electronic structure of $NaTaO_3$
M. Wakeshima, K. Ino and Y. Hinatsu	145	Magnetic properties of a quaternary iron sulfide $BaLa_2FeS_5$
G. Chen, H. Jain, S. Khalid, J. Li, D.A. Drabold and S.R. Elliott	149	Study of structural changes in amorphous As_2Se_3 by EXAFS under in situ laser irradiation
I. Lo, K.H. Lee, L.-W. Tu, J.K. Tsai, W.C. Mitchel, R.C. Tu and Y.K. Su	155	Thermal effect on quantum confinement in $ZnS_{0.06}Se_{0.94}/Zn_{0.8}Cd_{0.2}Se$ quantum wells
M.S. Moreno, J.E. Gayone, M. Abbate, A. Caneiro, D. Niebieskikwiat, R.D. Sánchez, A. de Siervo, R. Landers and G. Zampieri	161	Fe and Mo Valences in Sr_2FeMoO_6
N. Kojima, W. Aoki, M. Itoi, Y. Ono, M. Seto, Y. Kobayashi and Y. Maeda	165	Charge transfer phase transition and ferromagnetism in a mixed-valence iron complex, $(n-C_3H_7)_4N[Fe^{II}Fe^{III}(dto)_3]$ ($dto = C_2O_2S_2$)
H.M. Widatallah, C. Johnson, F. Berry and M. Pekala	171	Synthesis, structural, and magnetic characterisation of magnesium-doped lithium ferrite of composition $Li_{0.5}Fe_{2.5}O_4$
S.M. Bose and S.N. Behera	177	Plasmon contribution to the Raman spectra of a circular quantum wire
	I	Author Index
	III	Instructions to Authors
	V	Keywords

VOLUME 120, NUMBERS 5-6

(Published 8 October 2001)

CONTENTS

K. Chang and F.M. Peeters	181	Spin polarized tunneling through diluted magnetic semiconductor barriers
Y. Jiang and S.L. Yuan	185	Phase separation and its effect on transport properties in $\text{La}_{0.5}\text{Ca}_{0.5-x}\text{Ba}_x\text{MnO}_3$ ($0 < x < 0.5$) system
E. Gratz, A.S. Markosyan, I.Y. Gaidukova, V.E. Rodimin, St. Berger, E. Bauer and H. Michor	191	Temperature induced itinerant electron metamagnetism in ErCo_3 and HoCo_3 : influence of an external field and pressure
P. Sen and J.T. Andrews	195	Nonlinear absorption in semiconductor quantum dots
P. Sen, S.K. Bandyopadhyay, P. Barat and P. Mukherjee	201	Study of grain boundary characteristics of proton irradiated textured polycrystalline $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_{8+x}$ and $\text{Bi}_{1.84}\text{Pb}_{0.34}\text{Sr}_{1.91}\text{Ca}_{2.03}\text{Cu}_{3.06}\text{O}_{10+x}$ superconductors
R.E. Alonso, C. Horowitz, A. López García, D.G. Lamas and A. Caneiro	205	Second order tetragonal-to-cubic phase transition in $\text{Sr}_{0.5}\text{Ba}_{0.5}\text{HfO}_3$
G. Qin, W. Qin, S. Huang, C. Wu, B. Chen, S. Lu and E. Shulin	211	Up-converting Yb^{3+} - Er^{3+} co-doped amorphous fluoride thin films prepared by pulsed-laser deposition for visible light source
M. Rajagopalan, P. Selvamani, G. Vaitheeswaran, V. Kanchana and M. Sundareswari	215	Calculation of superconducting transition temperature of MgB_2
V. Damodara Das and R. Chandra Mallik	217	Thermoelectric behaviour of $(\text{Bi}_{0.5}\text{Sb}_{0.5})_2\text{Te}_3$ semiconducting alloy thin films
H.S. Jeon, S.K. Kim, H.L. Park, G.C. Kim, J.H. Bang and M. Lee	221	Observation of Two Independent Energy Transfer Mechanisms in $\text{BaAl}_{12}\text{O}_{19}$: $\text{Ce}^{3+} + \text{Eu}^{2+}$ phosphor
D.X. Li, S. Nimori, Y. Shiokawa, Y. Haga, E. Yamamoto and Y. Onuki	227	Magnetic, transport, and thermal properties of ternary inter-metallic compound Nd_2PtSi_3
S.J. Luo and K.L. Yao	233	Torsion- and spin-density-functional theory for non-collinear magnetic systems
E. Soignard, M. Somayazulu, H.-K. Mao, J. Dong, O.F. Sankey and P.F. McMillan	237	High pressure–high temperature investigation of the stability of nitride spinels in the systems Si_3N_4 – Ge_3N_4
M. Daouahi, A. Ben Othmane, K. Zellama, A. Zeinert, M. Essamet and H. Bouchriha	243	Effect of the hydrogen bonding and content on the opto-electronic properties of radiofrequency magnetron sputtered hydrogenated amorphous silicon films
S. Sahling and S. Abens	249	Low temperature thermal properties of vitreous silica and plastically deformed pure aluminium
Y. Muraoka, H. Tabata and T. Kawai	255	Effects of light-irradiation on spin-glass state and magneto-resistive properties of $\text{Zn}_{0.5}\text{Co}_{0.5}\text{Fe}_2\text{O}_4$ spinel ferrite films
	I	Instructions to Authors
	III	Keywords

VOLUME 120, NUMBERS 7–8

(Published 22 October 2001)

CONTENTS

A.V. Kavokin, G. Malpuech and W. Langbein	259	Theory of propagation and scattering of exciton–polaritons in quantum wells
---	-----	---

Vol. 120, Nos 1–12 Volume Index

A.V. Skripov, H. Natter and R. Hempelmann	265	Neutron spectroscopic evidence of a low-temperature phase transition in C15-type ZrCr_2H_x ($x = 0.2$ and 0.45)
Z. Shi, Y. Li, S. Wang, C. Du, S. Xiao, H. Fang, Y. Zhou and D. Zhu	269	Formation and properties of the nanoparticles based on salt-derivatived C_{60}
M. Wakeshima, Y. Izumiyama, Y. Doi and Y. Hinatsu	273	Valence transition in ordered perovskites $\text{Ba}_2\text{PrRu}_{1-x}\text{Ir}_x\text{O}_6$
S. Birner, J. Kim, D.A. Richie, J.W. Wilkins, A.F. Voter and T. Lenosky	279	Accelerated dynamics simulations of interstitial-cluster growth
Y.M. Zhao, P.F. Zhou, X.J. Yang, G.M. Qiu and L. Ping	283	Magnetotransport properties of $\text{SrFeO}_{2.95}$ perovskite
R. Chatterjee, A. Kanjilal, A. Dunlop, U. Tiwari and J.M. Ramillon	289	The observation of oscillatory behaviour in swift heavy ion irradiated quasicrystals
J. Kawamura, K. Morota, N. Kuwata, Y. Nakamura, H. Maekawa, T. Hattori, N. Imanaka, Y. Okazaki and G.-y. Adachi	295	High temperature ^{31}P NMR study on Mg^{2+} ion conductors
J.S. Kim, H.I. Kang, S.B. Lee, S.H. Sue, J.C. Choi, M. Lee, J.H. Bahng, H.L. Park, G.C. Kim, T.W. Kim, Y.H. Whang and S.I. Mho	299	Structural and optical properties of Mn^{2+} and Li^+ codoped $\text{ZnGa}_2\text{O}_{3.95}\text{M}_{0.05}$ ($M = \text{S}, \text{Se}, \text{and Te}$) phosphors
A.K. Raychaudhuri, A. Guha, I. Das, R. Rawat and C.N.R. Rao	303	Thermal relaxation in charge ordered $\text{Pr}_{0.63}\text{Ca}_{0.37}\text{MnO}_3$ in the presence of a magnetic field
E.O. Chi, W.S. Kim and N.H. Hur	307	Nearly zero temperature coefficient of resistivity in anti-perovskite compound CuNMn_3
W.K. Hung, M.Y. Chern, Y.F. Chen, W.C. Chou, C.S. Yang, C.C. Cheng and J.L. Shen	311	Optical properties of $\text{Zn}_{1-x}\text{Mn}_x\text{Se}$ ($x \leq 0.78$) epilayers
C. Castellano, F. Cordero, R. Cantelli, M. Ferretti and D.D. Sarma	317	Dynamics of the low temperature inhomogeneous phase in manganese perovskites
G. Xu, H. Luo, Y. Guo, Y. Gao, H. Xu, Z. Qi, W. Zhong and Z. Yin	321	Growth and piezoelectric properties of $\text{Pb}(\text{Mg}_{1/3}\text{Nb}_{2/3})\text{O}_3$ – PbTiO_3 crystals by the modified Bridgman technique
G. Gangadhar Reddy, A. Ramakanth and S.K. Ghatak	325	Spectral density approach to the double exchange model
V.M. Harik	331	Ranges of applicability for the continuum beam model in the mechanics of carbon nanotubes and nanorods
	I	Author Index
	V	Instructions to Authors
	VII	Keywords

VOLUME 120, NUMBERS 9–10

(Published 2 November 2001)

CONTENTS

M. Lejeune, O. Durand-Drouhin, K. Zellama and M. Benlahsen	337	Structure and optical properties of carbon nitride films deposited by magnetron sputtering
J.H. Bahng, M.S. Jang, M. Lee, J.C. Choi, H.L. Park, K.J. Kim and C. Lee	343	Strain dependence and deformation potential of the E_1 and $E_1 + \Delta_1$ transitions of ZnTe grown on a GaAs (001) substrate

Vol. 120, Nos 1–12 Volume Index

Y.J. Uemura	347	Microscopic phase separation in the overdoped region of high- T_c cuprate superconductors
C.S. Tang and C.S. Chu	353	Nonadiabatic quantum pumping in mesoscopic nanostructures
C.S. Hong, W.S. Kim and N.H. Hur	359	Anomalous post-annealing effects on magnetic and electrical properties of $\text{La}_{0.8}\text{Ca}_{0.2}\text{MnO}_3$
R. Ganguly, C. Martin, A. Maignan, M. Hervieu and B. Raveau	363	Ruthenium doping of the layered charge ordered manganites, $\text{La}_{0.5}\text{Sr}_{1.5}\text{MnO}_4$ and $\text{LaSr}_2\text{Mn}_2\text{O}_7$
C.R.S. da Silva, P. Venezuela, A.J.R. da Silva and A. Fazzio	369	Theoretical investigation of the pressure induced cubic-diamond- β -tin phase transition in the $\text{Si}_{0.5}\text{Ge}_{0.5}$
P. Raj, A. Sathyamoorthy, K. Shashikala, C.R. Venkateswara Rao and S.K. Malik	375	CeIrGaH_y system: hydrogen induced structural and valence change
P. Victor, S.S.N. Bharadwaja, J. Nagaraju and S.B. Krupanidhi	379	Temperature dependence on the response of inversion layer with zirconium titanate as oxide in MOS configuration
M.L. Kulić	383	Possible thermosensor on S–N–S weak link with N as heavy fermion metal
R. Rapaport, A. Qarry, G. Ramon, E. Cohen, A. Ron and L.N. Pfeiffer	387	Free electron effects on the cavity polariton linewidth in an AlAs/AlGaAs microcavity containing a two-dimensional electron gas
A. John Peter and K. Navaneethakrishnan	393	Semiconductor–metal transition in a quasi two-dimensional system
Z. Wang, X. Xu, K. Fu, R. Song, J. Wang, J. Wei, Y. Liu and Z. Shao	397	Non-critical phase matching of $\text{Gd}_x\text{Y}_{1-x}\text{Ca}_4\text{O}(\text{BO}_3)_3(\text{Gd}_x\text{Y}_{1-x}\text{COB})$ crystal
J.K. Jung, Y.M. Seo, S.K. Song and S.H. Choh	401	Impurity induced effect for the paraelectric to ferroelectric transition in a NaNO_2 – KNO_3 mixture observed by ^{23}Na NMR
A. Kowalczyk, G. Chełkowska and A. Szajek	407	X-ray photoemission spectra and electronic structure of GdCo_4B
M.R. Aouas, W. Sekkal and A. Zaoui	413	Pressure effect on phonon modes in gallium nitride: a molecular dynamics study
	I	Instructions to Authors
	III	Keywords

VOLUME 120, NUMBER 11

(Published 19 November 2001)

CONTENTS

A. Merizzi, M. Massé and E. Fortin	419	Anomalous optical absorption in Cu_2O in the presence of an excitonic Bose condensate
J. Rubio, L. Pfeiffer, M.H. Szymanska, A. Pinczuk, S. He, H.U. Baranger, P.B. Littlewood, K.W. West and B.S. Dennis	423	Coexistence of excitonic lasing with electron–hole plasma spontaneous emission in one-dimensional semiconductor structures
B.J. Fogal, S.K. O’Leary, D.J. Lockwood, J.-M. Baribeau, M. Noël and J.C. Zinkels	429	Disorder and the optical properties of amorphous silicon grown by molecular beam epitaxy
Y. Fan, J. Ju, W. Zhang, Y. Xia, Z. Wang, Z. Fang and L. Wang	435	A new passivation method for porous silicon
H. Saeki, H. Tabata and T. Kawai	439	Magnetic and electric properties of vanadium doped ZnO films

Vol. 120, Nos 1–12 Volume Index

S. Ghosh, A. Ingale, T. Som, D. Kabiraj, A. Tripathi, S. Mishra, S. Zhang, X. Hong and D.K. Avasthi	445	Structural effect on electronic sputtering of hydrogenated amorphous carbon films
M.H. Mahmoud, H.H. Hamdeh, J.C. Ho, A.M. Abdalla and A.I. Abdel-Mageed	451	Mössbauer studies on $\text{MnGa}_x\text{Fe}_{2-x}\text{O}_4$
E.G. Villora, T. Atou, T. Sekiguchi, T. Sugawara, M. Kikuchi and T. Fukuda	455	Cathodoluminescence of undoped $\beta\text{-Ga}_2\text{O}_3$ single crystals
Z.B. Guo, D. You, J.J. Qiu, K.B. Li and Y.H. Wu	459	Influence of Ga^+ ion irradiation on magnetoresistance and exchange bias of $\text{IrMn/CoFe/Cu/CoFe/NiFe}$ spin valve
M.F. Manger, E. Batke and W. Wegscheider	463	Cyclotron resonance at fractional Landau-level fillings
R.G. Monteiro, V. Ravindranath and M.S. Ramachandra Rao	469	Magnetotransport correlations in Pr- and La-based manganites

VOLUME 120, NUMBERS 12

(Published 30 November 2001)

CONTENTS

J.M. Wesselinowa	475	Central peak of partially deuterated hydrogen-bonded ferro- electrics
W.J. Cottrell, T.G. Ference and K.A. Puzey	479	Optical response of a YBCO light modulating device driven by a critical amount of current
G.-Q. Gu, P.M. Hui, C. Xu, C. Xu and W.C. Woo	483	Field transformation approach to photonic band structure calculations
Ö. Bozat and Z. Gedik	487	Temperature and magnetic field dependence of superconduct- ivity in nanoscopic metallic grains
M.K. Ashurov, A.F. Rakov and R.A. Erzin	491	Luminescence of defect centers in yttrium–aluminum garnet crystals
C.L. Yuan, Y. Zhu and P.P. Ong	495	The effects of Cu doping on the magnetoresistive behavior of perovskites $\text{La}_{0.7}\text{Ca}_{0.3}\text{MnO}_3$
Y.C. Lee, H.T. Shu, J.L. Shen, K.F. Liao and W.Y. Uen	501	Influence of holmium doping on the optical properties of quaternary InGaAsP epitaxial layers
Q. Jianquan, Z. Qing, W. Yongli, W. Yajing and L. Longtu	505	Enhancement of positive temperature coefficient resistance effect of BaTiO_3 -based semiconducting ceramics caused by B_2O_3 vapor dopants
M.-Y. Ryu, G.G. Shim, P.W. Yu, E. Oh, C. Sone, O. Nam and Y. Park	509	Optical properties of InGaN/GaN double quantum wells with varying well thickness
Y. Kobayashi, S. Endo, K. Deguchi, L.C. Ming and G. Zou	515	The p – T phase diagram of KNbO_3 by a dielectric constant measurement
A.C. Bódi, R. Laiho and E. Lähderanta	519	Creeping instability in YBCO ceramics under non-isothermal superconducting transition
N. Attaf, M.S. Aida and L. Hadjeris	525	Thermal conductivity of hydrogenated amorphous silicon
	I	Volume Index
	IX	Author Index
	XV	Instructions to Authors
	XVII	Keywords

